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Report of the World Bank on the International Comparison Programme

Note by the Secretary-General

In accordance with a request of the Statistical Commission at its thirty-seventh session,** the Secretary-General has the honour to transmit the report on the International Comparison Programme prepared by the Global Office of the International Comparison Programme at the World Bank. The Commission is requested to review progress and provide direction on the continuation of the Programme.

* E/CN.3/2007/1.

** See *Official Records of the Economic and Social Council, 2006, Supplement No. 4* (E/2006/24), chap. I, sect. B, para. 2.

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I. Introduction

1. The International Comparison Programme (ICP) is a global statistical initiative involving national, regional and international agencies coordinated by the World Bank. The governance structure consists of an Executive Board composed of senior members of selected multilateral, regional and national organizations, all of which are deeply engaged in the management of the programme. The Global Office, housed at the World Bank, acts as the secretariat to the Board and is in charge of the conceptual and data integrity of ICP, interregional coordination and publication of the global results.

2. The Latin American region, consisting of nine Spanish-speaking countries and one Portuguese-speaking country of South America, was the first to publish results for household consumption components of the gross domestic product (GDP). The combination of a small number of homogeneous countries, their previous ICP experience, and the coordination and support from an experienced national statistical office allowed the region to publish results six months after the end of the reference period. A second report was published in October 2006, providing purchasing power parities (PPPs) and price level indices at the basic heading level.

3. Most of the other regions have completed data collection, and are planning their first publications for the first half of 2007. Price data collection for the ICP ring comparison programme, which will calibrate the regional PPPs to a global currency, has been completed for all consumption items except health, education and housing.

4. As a result of this progress, two publication dates have been established for the global results:

- September 2007, for household consumption, including the health and education components of government expenditures
- December 2007, for full GDP.

5. This paper provides an update on the status of the Programme since the previous report to the Statistical Commission (see E/CN.3/2006/8), includes background on how participation in the Programme contributes to statistical capacity-building, and concludes with a brief evaluation of lessons learned as they apply to the sustainability of the programme on an ongoing basis.

6. The Commission may wish to comment on the progress to date and the direction the Programme should take to ensure its longer term sustainability.

II. Overview of the global programme

A. Data collection

7. Most national statistical offices completed a major data collection effort, having obtained prices on a monthly and quarterly basis for at least part of the 2005 reference year for items in the consumption basket, not counting health, education and housing. There were 144 countries, including the Statistical Office of the European Communities/Organization for Economic Cooperation and Development (Eurostat/OECD) member countries, participating at the same time one year ago; all

but three have provided data on a timetable to allow their inclusion in the global results.

8. Data quality problems for the health and education sectors, especially in obtaining comparable estimates for the public sector components, have created delays in the preparation of total consumption results. The lack of comparability of methods used to estimate owner-occupied housing also created quality problems.

9. Because of the expertise required to collect and validate the equipment and construction data, the regions relied on expert consultants. The Global Office also provided international consultants to review the data to ensure comparability across regions.

B. Data validation

10. The current round of the International Comparison Programme is more ambitious than previous rounds in terms of the number of products priced, the number of countries, the introduction of new methodology and the attention to the overall statistical operations.

11. The Global Office is supporting the final data review by providing the computations of the basic heading PPPs and aggregates of GDP for each region. This support will continue through the publication stage, with guidance to be provided on the level of detail to be published. Data quality varies across countries resulting from different levels of resources and statistical capacity. The goal is to include as many countries as possible; therefore, the calculation of PPPs will be in stages with those not meeting quality standards of other countries to be added after the other computations are finalized. Metadata will be provided to advise data users.

C. Preparation of expenditure weights and national accounts review

12. All regions have obtained the required breakdown of the national GDPs into the 155 basic headings based on the most recent available data. For many countries, this is for the 2004 GDP or an earlier year. The weights to aggregate the basic heading PPPs to higher levels will reflect the most recent expenditure weights structure applied to the 2005 GDP.

13. The Global Office prepared a weights diagnostic module to evaluate the data by basic headings across countries within each region, and to identify inconsistencies in either the breakdown or the level of the national accounts. It has also started to collect detailed metadata on the estimation procedures for individual national accounts to understand major departures from intercountry comparability.

D. International Comparison Programme Handbook and Operational Manual

14. The ICP Handbook and the Operational Manual document the underlying methodology and procedures for the current round of the Programme. They provide guidance on setting up the survey framework and data collection. Chapters are devoted to data editing and pricing government services, housing, and equipment

and construction. Separate guidelines are also provided for health and housing data collection. Other chapters document the methodology for estimation and aggregation of PPPs for the regional and ring comparisons. Some regions have provided translated versions to their countries.

E. Software

15. The ICP tool pack software has matured into a suite of tools that support activities such as preparing product lists and specifications using the structured product description (SPD) approach, data-collection forms, and diagnostic tables supporting data validation. Experience obtained in harmonizing and preparing the ring product list is now being used to support preparation of future regional product lists.

16. The ICP tool pack was converted from a web-based to a Windows platform to simplify and enable its use in regions and countries that had stringent security restrictions for using web-based systems.

17. New data entry modules were developed specific to equipment, construction and government compensation items. Aligned with those data entry modules were new software modules to assist expert consultants in reviewing and validating price data collected on those items. A new diagnostic module was developed for the regions to validate expenditure weights data provided by countries.

F. International Comparison Programme newsletters and website

18. The quarterly newsletter continues to expand in scope and coverage to include articles on methods and uses of PPPs, in addition to providing updates on the progress of the current round. The ICP website was used to publish the Latin American results and will also be the vehicle for the results from the other regions and the global report. The website contains complete coverage of governance issues discussed at the Executive Board meetings and regional coordinator workshops. It also contains the most up-to-date versions of the ICP Handbook and the Operational Manual. The website is undergoing a review in preparation for the publication of the regional and global reports.

G. Linking the regions

19. While the bottom-up process of developing unique regional product specifications will improve the regional PPPs, they need to be calibrated to a global currency to allow comparisons across regions. The previous process, which relied on a single country pricing products from other regional lists to "bridge" the PPPs, produced results influenced by the pricing structure of the bridge country.

20. New methodology, called the ring comparison, has been implemented to overcome the perceived weakness of the previous approach. One of the major outcomes is the global ring product list, which was prepared by creating a composite of the regional lists. The end product is an international set of product specifications that overlap the different regions based on harmonized terms and definitions. This global ring product list can be a starting point for future international comparisons.

21. The introduction of the ring comparison concept required the development of new methodology to use the PPPs from the ring comparison to calibrate the regional data to a global currency. The resulting methodology is documented in chapters 14 and 15 of the ICP Handbook.

22. The annex to the present report shows the countries included in the ring comparison. The Commonwealth of Independent States (CIS) region will not be included. Instead, Russia has priced the OECD list of specifications, which will allow it to be included in that comparison. This means that the first stage of the global linking will include Africa, Asia, Western Asia, Latin America and Eurostat/OECD. Once those results are finalized, Russia and the rest of the CIS member countries will enter the comparison using Russia as a traditional bridge between OECD and CIS.

H. Publications

23. The summary and detailed findings for Latin America — aggregates and PPPs — can be found on the World Bank ICP website. Significant findings were that per capita measures differ significantly from those based on extrapolations from the previous ICP round. It showed that the gap between the relatively richest and poorest countries was considerably narrowed, and the ranking by per capita expenditures was substantially changed.

24. The other regions are following their own timetable to publish results. Two publication dates, September and December 2007, have been established for the global results. Effective consumption for 2005, including the health and education components of government expenditures, will be published in September 2007. The most recent official estimates of the 2005 GDP and basic components will be used. A final report showing full GDP will be published in December 2007. There may be countries added that could not be included in the September 2007 report. The Global Office, in consultation with the ICP regions and Eurostat/OECD, will determine the level of detail to be published in the global report. Regional coordinators may wish to publish more detail at a later time.

I. Financial and technical resources

25. Considerable effort is under way to obtain additional resources to bring the 2005 Programme to closure. While the World Bank has assumed the largest share of funding for the global programme (over US$ 8 million), the programme benefited from significant financial contributions from the aid organizations in Australia, Canada and the United Kingdom of Great Britain and Northern Ireland, and the International Monetary Fund and the United Nations Development Programme. The African and Asian Development Banks provided significant resources for their regional programmes, as did the Arab Fund for the Economic and Social Commission for Western Asia. Eurostat and OECD provided significant in kind support with technical assistance and support for the data collection carried out by their member countries participating in the ring comparison. National statistical offices in Australia, Canada, the United Kingdom, France and Russia also provided significant technical support to regional programmes. The contributions of the

national statistical offices were significant, as their price data collection efforts far exceeded any compensation they received.

III. Approved policies

26. The following policies can be found on the ICP website:

- **Policies for the global data review**. Access and data sharing between each region and the Global Office are determined by bilateral arrangements with each region. This policy paper spells out the between-region data sharing and confidentiality requirements for the steps leading to the publication of the global results.
- **Procedures for publication of global PPPs and related measures**. Data from the regional and ring comparison programmes required by the Global Office are defined. The steps leading to publication are detailed along with the responsibilities of the regions and the Global Office. Policies regarding fixity of regional results and the numeraire currency are also in place. The role of Eurostat/OECD in this stage is included.
- **Access to ICP microdata and unpublished results**. This is an outcome of the efforts of a working group established by the Executive Board and the Global Office to provide policies regarding access by researchers to microdata and unpublished results after the regional and global results have been published. Policies regarding researcher access and the confidentiality restrictions are defined.

IV. Overview of the International Comparison Programme regional programmes and the Eurostat/OECD comparison

27. The ICP regions are working on several fronts, including finalizing consumption data for publication, completing data collection for the remaining GDP components, and participating with the Global Office and ring countries in that data collection and validation.

- **Latin America**: This was the first region for which total consumption data were estimated, analysed and published. Currently, the regional team is putting the finishing touches on the other components of GDP, but is experiencing a number of unsuspected difficulties, most of which are probably universal rather than regional. For example, occupational data on government are difficult to obtain and cannot be easily weighted. Foreign trade data are not as easy a source for capital equipment as expected. The region, with assistance from the Global Office, is completing the final data validation and preparing the data for publication at the GDP level in the first quarter of 2007.
- **Asia-Pacific**: Twenty-two countries are participating in the full GDP comparison, 13 have submitted construction data, and 16 have submitted equipment data. For health and education, there are disparities in price data from the countries, and guidance is being sought from the Global Office. Asia has submitted ring comparison data to the Global Office according to the timetable. Preliminary PPPs for Asia are scheduled to be published in the first

quarter of 2007. The Asia-Pacific region is collaborating with the World Bank on a regional poverty PPP project.

- **Africa**: Forty-eight countries have submitted consumption data, followed by 45 and 32, respectively, providing pharmaceutical and education data. Data submission for dwellings is ongoing. All ring countries have provided consumption data. Forty-six countries are reviewing GDP data to generate weights. The region faces the largest degree of complexity from the number of countries taking part and the fact that they have sharp differences in climate, cultures, and statistical capacity. Technical support is being provided by the national statistics offices of France and the United Kingdom, and the Global Office is assisting with the estimation processes. The region is hopeful that consumption data will be released in the first quarter of 2007, unless there are unforeseen circumstances.

- **Western Asia**: All participating countries in the Western Asia region have completed price surveys for household consumption. Health and education price surveys were conducted in 2006. Preliminary PPPs and per capita measures were calculated and examined. Countries are collecting prices for construction, equipment and compensation of employees in the government sector. Out of the 11 countries 10 have submitted 2004 GDP expenditure weights, which are undergoing the third round of validation. A regional meeting is scheduled for January 2007 to review the preliminary per capita results with the countries to reveal any potential problems in the data. The final consumption result should be ready for publication in the first quarter of 2007, after it is presented to heads of national statistical offices. The intention is to publish full GDP in the second quarter of 2007.

- **CIS**: Ten countries are participating in the comparison of GDP. Uzbekistan did not officially confirm its decision to participate; Turkmenistan did confirm its participation, but has not so far submitted any data and may withdraw from the comparison. Final results are expected to be obtained not later than September 2007; they will be submitted for approval to the Council of Heads of Statistical Services of the CIS countries, who will decide on the publication dates of the results.

- **Eurostat and OECD**: Eurostat and OECD conduct separate comparison programmes for their member countries. Eurostat/OECD is fully participating in the ring comparison with four member countries collecting prices that will be used to bring their results together with the ICP regions. Eurostat/OECD will be providing assistance with the global data review and the steps to include the CIS region in the final results.

V. Steps to improve data quality and build statistical capacity

28. The document entitled "Evaluation of the International Comparison Programme" (E/CN.3/1999/8), considered by the thirtieth session of the Statistical Commission, spelled out the deficiencies of previous rounds and the actions needed to ensure the continuation of the programme. As a result, many aspects of the programme have been re-engineered through the use of new methods and procedures to address the weaknesses detected by the evaluation.

29. The International Comparison Programme provides a unique opportunity to improve and harmonize statistical methodology around the world. The Programme shares a common technical language and conceptual framework related to national-level statistical programmes supporting the consumer price index (CPI) and output of national accounts. The very essence of the Programme is based on the comparability of results between countries, strict adherence to time schedules, and a common understanding of data sharing and confidentiality requirements. There is no other statistical programme requiring so much cooperation between national, regional and international organizations.

30. The fundamental concept underlying the estimation of PPPs is that the prices of products to be compared are based on the principles of representativity and comparability. The products selected should be simultaneously representative of what each country's consumers purchase and also have characteristics comparable across countries.

31. For these reasons, the procedure to determine the product specifications was re-engineered by developing the structured product description (SPD) procedure, allowing each region to develop its own specifications, and fully engaging countries in the process.

32. The detailed coding structure of the Eurostat/OECD classification of expenditures on GDP was integrated with the Classification of Individual Consumption According to Purpose (COICOP), which is an international standard adopted for use in national accounts for the compilation and analysis of consumption expenditures.

33. The long-term benefit is that the coding structure will allow a connection between products across ICP rounds. Countries can use it to harmonize the ICP list with their CPI products, thus integrating these activities. Many countries are planning to use the SPD approach to improve their CPI product specifications.

34. A new approach to compare the construction component of GDP was developed and implemented. The new procedure requires pricing a smaller list of construction components rather than a complete set of building inputs.

35. The concepts in the SPD process were used to define specifications for equipment to be priced to improve the equipment comparison. Data-collection forms were developed that allow countries to price either the targeted product or an alternate. If neither product was available, the form allowed the country to price something comparable and then to complete a coding structure defining the product.

36. While previous paragraphs provided specific examples where capacity-building took place, it also occurs indirectly. The need for countries to agree on a product list brings national-level price statisticians together to agree about how the products should be defined; this can lead to application of the same concepts to their CPIs. Training provided on sampling and survey methods, data validation, and estimation of average prices and PPPs adds to country-level knowledge to improve their price statistics.

37. When countries have to subject their GDP numbers to an international comparison, problems are exposed requiring them to take some action. Problems related to the difficult-to-compare components of GDP such as housing, government and capital formation are shared across countries, with them jointly sharing

knowledge and experience. The ICP Handbook went through several revisions as methodology and procedures evolved to improve the data quality. The final additions to the ICP tool pack suite of software to support data collection also contributed to data quality improvements.

VI. Lessons learned and the future of the International Comparison Programme

38. National statistical offices and regional coordinating organizations continue to ask questions about the future of the International Comparison Programme because of concerns that the experience and expertise gained from the investment in human capital and methodology will be lost in the absence of plans to continue the Programme. The previous section outlined some steps taken to resolve the data quality shortcomings of previous rounds. An evaluation of the current round will be in order to determine how well that goal was accomplished. The purpose of this section is to highlight a few lessons learned to date, so that the stage may be set for a strategic evaluation and planning for the future.

39. The first lesson learned stems from the fact that no country can produce a PPP by itself. This requires an all-around recognition that intercountry coordination is necessary. It is also essential to abide by standards accepted by other countries, share data collection and national accounting procedures, and allow data to be subjected to review by others. While there were letters of agreement between regions and countries, and also between regions and the Global Office, these agreements fell short because of a lack of mutual understanding of the requirements for participation in terms of data quality and timeliness, data-sharing responsibilities and adherence to prescribed procedures.

40. Even though the publication of the Latin American results made headlines in the regional financial press, little user support was mobilized and readied for vigorous support for a second round, as most energy went into preparing the regional estimates on time. The lesson learned is the need to interact with users, elicit their support and educate them about both the use of the data and the shortcomings, if the Programme is to become an ongoing programme.

41. The next lesson is related to the capacity of the participants. It is a rare national statistical office that does not have a full slate of official statistics to produce. It is a serious stretch for many to take on an additional data-collection effort to collect prices for several hundred items outside their CPI basket. The fact that we have come this far is a tribute to them. The lesson learned is that they cannot do everything at once, which is why consumption data were obtained in 2005 and collection for the remainder of the GDP components continued through most of 2006. The availability or lack thereof of indices to back cast the 2006 data will affect the final quality of the data.

42. The knowledge and expertise required to organize and coordinate a complex statistical programme is available in the national statistical offices of developed countries, more so than in the regional and international organizations. Support was provided by Statistics Canada in Latin America, Australia in Asia, Russia in the CIS region, and both the United Kingdom and France in Africa. The important lesson is

that similar partnering arrangements should be sought from the very beginning for future rounds.

43. More recognition needs to be given to the fact that the same language is not spoken in every country. Failure to allow sufficient time and resources for translation caused delays and data quality problems.

44. While the primary work programme for the International Comparison Programme involves the collection of prices, the final result is the use of PPPs to deflate national GDPs into a common currency so that per capita and structural comparisons can be made. While most efforts in the current round have been towards improving the price statistics, future rounds should give more emphasis to the underlying quality of countries' national accounts.

45. The ICP tool pack has evolved over the past few years as a result of better understanding of the ICP process and the needs and constraints of countries and regions. It has moved from a purely web-based system to its current stage on a Windows platform. It has been used at the country level in two regions. Other regions either had their own well-established software or had difficulty in implementing the tool pack. A valuable lesson learned is that such systems are invaluable for introducing data management and consistent methodology, but they must be easy to use and maintain.

46. The above sections highlighted the many methodological changes implemented to overcome previous problems. Their success is still an open question, subject to a review of the resulting data. It is difficult to develop and implement at the same time, which can result in false starts or repeated efforts. An important lesson is the need to control and manage any future enhancements before a proper evaluation.

47. The list of lessons learned would not be complete without a comment about resources. A commitment was made to cover the full GDP when there were inadequate resources to do so. Problems surfaced and the timetable leading to the Programme's completion is suffering as a result.

48. Overall, a major legacy of the 2005 round is the infrastructure that is now in place for the smooth continuation of future rounds. This starts with the capacity of the national and regional organizations and encompasses all the developments documented above. But it is a legacy at risk if there are no strong guarantees of continuity. For example, units dedicated to the International Comparison Programme in Latin America are being dismantled.

49. The scope of the next round needs to be determined, with attention being given to the above lessons on what can be done at one time. If there is to be a concentration on consumption, the SPD capabilities in place would allow regions and countries to update their product specifications and commence data collection in less than a year's time once the decision is made. Resources should be in place and no work attempted beyond what the resources allow.

50. Possible next steps include:

- A further evaluation of lessons learned and an assessment of the data quality, possibly by representatives of participating countries

- Evaluation of the consumption lists with an eye to reducing the scope and coverage of future data collections if quality can be maintained
- Evaluation of the ring comparison programme and product specifications to integrate that collection with the regional collections
- A workplan that puts the data collection on a continual basis with a subset of basic headings priced each year that avoids the significant start-up costs involved with a periodic programme
- Harmonization of CPI specifications in groups of countries, so that data collections can be more easily integrated with the International Comparison Programme
- Evaluation of the tool pack in some national statistical offices, and updating the system in line with forthcoming recommendations so that it can be used for the CPI as well as the International Comparison Programme
- Assisting countries to obtain resources for the International Comparison Programme as part of their operational programmes.

VII. Conclusion

51. **The International Comparison Programme faces unique challenges in providing statistical methods that can be carried out in practice by countries that differ in size, culture, and diversity in goods and services available to their population. This, plus the fact that statistical capabilities vary widely across countries, makes the Programme one of the most complex international statistical activities ever attempted.**

52. **The considerable progress since the previous report to the Commission is reflected by the publication of results in one region, with the other regions soon to follow. A considerable effort went into implementing new and improved methodology to improve data quality; that also contributed to statistical capacity and the sustainability of the Programme.**

53. **When the 2008 session of the Commission begins, the results of the 2005 round will have been published. That will reflect the culmination of a multi-year effort resulting in new methods being developed and documented, plus a substantial investment in human capital from the national to the global levels. Without a plan to move forward, the resources will begin to slip away, which will greatly increase the start-up costs if the effort has to begin anew at a later time.**

54. **The Commission is invited to consider the actions essential to move the Programme to a sustainable basis, and to deliberate on the prospective steps ahead. It is suggested that the Commission consider a first evaluation by representatives of a selection of participating countries to evaluate the usefulness of the data, review issues encountered in meeting the timetables, and recommend whether a complete evaluation of the governance and technical programme should take place. The representatives should also prepare initial recommendations about the requirements for country participation, the coverage of the full GDP versus consumption, and the timing of the next round.**

VIII. Points for discussion

55. **The Commission is requested to review and comment on progress to date. More specifically, the Commission is requested to provide direction for a timely first evaluation of the International Comparison Programme to determine its future scope and sustainability.**

Annex

List of ring countries

Africa	*Asia*	*Latin America*	*Western Asia*	*Eurostat and OECD*
Cameroon	Hong Kong, China	Brazil	Jordan	Estonia
Egypt	Malaysia	Chile	Oman	Japan
Kenya	Philippines			Slovenia
Senegal	Sri Lanka			United Kingdom
South Africa				
Zambia				